



# 2009 Annual Drinking Water Quality Report HYDE COUNTY WATER SYSTEM



04-48-010

We're very pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. I'm pleased to report that our drinking water is safe and meets Federal and State requirements.

## ***What EPA Wants You to Know***

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water

which must provide the same protection from public health. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals, and radioactive substances. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.



More information about contaminants and potential health effects can be obtained by calling The Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

## ***WHERE DOES MY WATER COME FROM?***

The water that we provide to our customers comes from two separate locations in the county. The first location is the Ponzer area just off Highway 45, where our water sources are two deep wells which draw from the Castle Hayne Aquifer. The second location is the Fairfield area just off SR 1305, where our water sources are two shallow wells which draw from the Yorktown Aquifer.

## ***HOW IS MY WATER TREATED AND PURIFIED?***

All the water from the Hyde County Water System is treated with two state of the art Reverse Osmosis water plants. The treatment process (in general) consists of pumping water from the wells through a set of 5 micron cartridge filters. Then a R/O booster pump forces the water through an array of semipermeable membranes. The R/O unit rejects 98% of all minerals and recovers 75% of all the water that passes through

the unit. The water is then aerated, chlorinated, and pH balanced before pumping to sanitized ground storage tanks, elevated tanks, and into your home or business. If you would like more details on the treatment process, please call the Ponzer water plant at 252-935-5327 or the Fairfield water plant at 252-926-2363.



## WATER QUALITY DATA TABLE of DETECTED CONTAMINANTS

We routinely monitor for over 120 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we *detected* in the last round of sampling for the particular contaminant group. The presence of contaminants does *not* necessarily indicate

that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1—December 31, 2009. The EPA or the State requires it to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally –occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

### Important Drinking Water Definitions:

Not-Applicable (N/A) – information not applicable/ not required for that particular water system or for that particular Rule.

Non-Detects (ND) – laboratory analysis indicates that the contaminant is not present at the level of detection set of the particular methodology used.

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years, or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter – one part per billion corresponds to the minute in 2000 years, or in a single penny in \$10,000,000.

Picocuries per liter (pCi/L) – picocuries per liter is a measure of the radioactivity in water.

Action Level (AL) – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level – The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal – The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health, MCLGs allow for a margin of safety.

Extra Note: MCL's are set at very stringent levels. To understand the possible health effects described for many related constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

#### Lead and Copper Contaminants—regulated at the user's tap

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) (90 <sup>th</sup> percentile)	2008	.069	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservations
Lead (ppb) (90 <sup>th</sup> percentile)	2008	ND	0	0	AL=.015	Corrosion of household plumbing systems, erosion of natural deposits

#### Radiological Contaminants—regulated at the user's tap

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Beta/photom emitters (pCi/l)	2003	N	7.3	0	50	Decay of natural and manmade deposits

#### Disinfection By-Product Contaminant—regulated at the user's tap

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppm) [Total trihalomethanes]	2009	N	.025	.003	.047	N/A	.080	By-product of drinking water chlorination
HAA5(ppm)	2009	N	.007	ND	.007	N/A	.060	By-Product of drinking water disinfection

#### Microbiological Contaminants

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	2	0	(systems that collect 40 samples per month) 5% of monthly samples are positive; (systems that collect fewer than 40 samples per month) 1 positive monthly sample	Naturally present in the environment

Secondary Contaminants, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic contaminants normally do not have any health effects and normally do not affect the safety of your water.

#### Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Range		Secondary MCL
			Low	High	
Sodium (ppm)	2007	17.69	1.77	33.6	N/A
pH)	2007	6.81	6.26	7.36	6.5 to 8.5

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating in Higher, Moderate, and Lower.

The relative susceptibility rating of each source for Hyde County Water System was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area.) The assessment findings are summarized in the table below.

**Susceptibility of Sources to Potential Contaminant Sources (PCSs)**

Source Name	Susceptibility Rating	SWAP Report Date
Fairfield Well #1	Moderate	March 30, 2007
Fairfield Well #2	Moderate	March 30, 2007
Ponzer Well #1	Lower	March 30, 2007
Ponzer Well #2	Lower	March 30, 2007

It is important to understand that a susceptibility rating of higher does not imply poor water quality. Susceptibility is an indication of a water supplies potential to become contaminated by the identified PCSs within the assessment area.

The complete SWAP Assessment report for Hyde County Water System may be viewed on the Web at: <http://www.deh.enr.state.nc.us/pws.swap> To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program—Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to [swap@ncmail.net](mailto:swap@ncmail.net). Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-715-2633.

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We at the Hyde County Water System work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future. If you have any questions about this report or concerning your water utility, please contact Clint Berry (Director of Public Services) at 252-926-4196. We want our valued customers to be informed about their water utility.

## ***WATER CONSERVATION TIPS***

Water conservation measures not only save the supply of our water source, but can also cut the cost of water treatment. They can cut the energy costs at the treatment facility associated with pumping, and also chemical costs for processing of the water. There are a number of measures you as the water consumer can do to conserve on water usage.

### **Conservation measures you can use inside your home include:**

1. Fixing leaking faucets, pipes, toilets, etc.
2. Installation of water-saving devices in faucets, toilets, and appliances.
3. Wash only full loads of laundry.
4. Take shorter showers.
5. Do not let the water run while shaving, washing, or brushing teeth.
6. Run the dishwasher only when full.

### **You can conserve outdoors as well:**

1. Water the lawn and garden as little as possible. If you must water, do so in the early morning or evening.
2. Repair leaks in faucets and hoses. Use water-saving nozzles.
3. Use water from a bucket to wash your car and save the hose for rinsing.